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July 19, 2016

Mr. Balaji Vaidyanathan
Manager, Air Quality Permits Section
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

**Re: Addendum to CGS Regional Haze Permit and SIP Revision
Salt River Project – Coronado Generating Station
Class I Permit Number 52639**

Dear Mr. Vaidyanathan:

The Salt River Project Agricultural Improvement and Power District ("SRP") owns and operates the Coronado Generating Station ("CGS") located approximately six miles northeast of St. Johns off U.S. Highway 191, in Apache County, Arizona. CGS consists of two pulverized coal-fired, electric utility steam boilers (Units 1 and 2), which generate approximately 762 megawatts (MW) (net) of electricity. Units 1 and 2 were completed and started operation in 1979-1980. CGS generates electricity for sale and the SIC code for this operation is 4911. Units 1 and 2 are dry-bottom turbo-fired boilers with a net rated output of 380 MW and 382 MW, respectively, primarily firing low-sulfur western coals.

CGS Unit 1 and Unit 2 are Regional Haze Program - Best Available Retrofit Technology ("BART") eligible units per 40 CFR § 51.301. The Arizona Department of Environmental Quality ("ADEQ") determined that the CGS units may reasonably be anticipated to cause or contribute to visibility impairment at a Class I area and, as such, are subject to BART. In January 2016, SRP submitted an application that included information necessary for revision and supplementation of the Regional Haze Rule ("RHR") section of the Arizona State Implementation Plan ("Regional Haze SIP" or "SIP") and the U.S. Environmental Protection Agency ("EPA") Federal Implementation Plan ("FIP"), as well as the associated permit revisions to incorporate relevant requirements. Following that submittal, a revision to the characterization of the BART Alternatives was made and additional modeling was conducted changing some elements of the original application. As a result, SRP is providing the enclosed addendum to the "Application for Significant Permit Revision and Regional Haze State Implementation Plan Revision for the Coronado Generating Station" and the revised Better-than-BART modeling analysis report.



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If you have any questions regarding this revision application, please contact Bill McClellan at (602) 236-5387.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Bevier', with a horizontal line extending to the right.

Dan Bevier
Plant Manager

cc: Mr. Gerardo Rios, EPA Region 9
Mr. Prabhat Bhargava, SRP
Mr. Bill McClellan, SRP
LOC 5-2-7

ADDENDUM TO THE “APPLICATION FOR SIGNIFICANT PERMIT REVISION AND REGIONAL HAZE STATE IMPLEMENTATION PLAN REVISION FOR THE CORONADO GENERATING STATION” SUBMITTED BY SRP IN JANUARY 2016

Background

On January 22, 2016, the Salt River Project Agricultural Improvement and Power District (“SRP”) submitted an application for a revision to the Class I permit for Coronado Generating Station (“CGS”) and a revision to the Regional Haze State Implementation Plan (“SIP”) (collectively, the “SRP Application”) to the Arizona Department of Environmental Quality (“ADEQ”). This application addresses alternative best available retrofit technology (“BART”) requirements for CGS Unit 1 and Unit 2. Compliance options were proposed for CGS that include an interim “better-than-BART” (“BTB”) compliance strategy followed by one of two final compliance options: either installation and operation of a selective catalytic reduction (“SCR”) system at Unit 1 or retirement of Unit 1. Upon completing its review, the Arizona Department of Environmental Quality (“ADEQ”), after consultation with the U.S. Environmental Protection Agency (“EPA”), provided feedback to SRP regarding certain elements of the SRP Application. Specifically, ADEQ requested a revision to the characterization of the BART Alternative per 40 CFR § 51.308(e)(3) to account for two alternative operating scenarios, each including an interim and a final compliance strategy. In addition EPA requested changes to the modeling assumptions which are incorporated into the revised modeling report and this addendum. With this addendum SRP is revising the characterization of the BART Alternative as two operating scenarios as described below.

BART Alternative

In order to comply with the Regional Haze Rule (“RHR”) requirements under 40 CFR § 51.308, SRP is providing this addendum to the SRP Application that includes:

- A demonstration that CGS’s alternative to BART (“BART Alternative”) satisfies the Better-than-BART test under 40 CFR § 51.308(e)(2); and
- A demonstration that the SIP revision will not interfere with the ability of the program area to attain/maintain the National Ambient Air Quality Standards (“NAAQS”) or any other requirement of the Clean Air Act (“CAA”).

Operating Strategy – 1 (OS-1): Seasonal Curtailments Followed by SCR on Unit 1

With this operating strategy, SRP will comply with the interim operating strategy (identified as “IS” and involving four options for seasonal curtailment) followed by installation and operation of an SCR system on Unit 1 no later than December 31, 2029. Consistent with the EPA BART determination, the SCR system would be required to achieve a NO_x limit of 0.065 lb/MMBtu on a 30-boiler-operating-day average basis. The interim operating strategy will include four separate and alternative seasonal curtailment periods for CGS Unit 1 coupled with options for operation at a sulfur dioxide (SO₂) emissions rate that is below the BART limits for both CGS units and a NO_x emissions rate that is below the current permit limit for CGS Unit 1. In each year, the length of the required curtailment period for CGS Unit 1 will be dependent on the SO₂ emissions performance of both Units 1 and 2, and the NO_x emissions performance of Unit 1.

Operating Strategy -2 (OS-2): Seasonal Curtailments Followed by Unit 1 Shutdown

Under this operating strategy, SRP will comply with the interim operating strategy followed by the permanent cessation of operation of Unit 1 no later than December 31, 2029.

BART Alternative Implementation Schedule

Under the BART Alternative, SRP will implement the interim operating strategy on December 5, 2017, the compliance date established by the BART requirements under the Federal Implementation Plan (“FIP”) established by U.S. EPA. In the first year of implementation, Unit 1 will begin the interim operating strategy on December 5. The curtailment period will end according to the emissions performance during 2017. In subsequent years, the interim operating strategy will begin and end according to the emissions performance in the corresponding year. By December 31, 2026, SRP will select a BART Alternative operating strategy and will submit a notification to U.S. EPA and ADEQ regarding the same.

The CPP is currently under a stay issued by the U.S. Supreme Court, increasing uncertainty about the schedule for implementation of the rule and thus creating uncertainty regarding CGS. If it is assumed that litigation is resolved in 2018 and the CPP is retained but subject to a day-for-day compliance deadline extension, initial compliance would begin in 2025, one year prior to the 2026 BART Alternative operating strategy selection deadline. This timeline would provide SRP with the necessary time to conduct agency notifications and proceed with planning, design and construction of an SCR system if OS-1 is elected and planning and procurement of alternate system resource arrangements if OS-2 is elected. If SRP elects OS-1, SRP will apply the interim operating strategy until an SCR system is installed and operating, which will occur no later than December 31, 2029. If OS-2 is elected, SRP will apply the interim operating strategy until the Unit 1 permanent closure, which will occur no later than December 31, 2029.

Interim Operating Strategy for CGS

As previously explained, starting on December 5, 2017, the proposed interim operating strategy will be part of both OS-1 and OS-2 options under the BART Alternative. The interim operating strategy under the BART Alternative is same as the “Interim Compliance Strategy: BTB Alternatives” in the January 2016 SRP Application. However, updated visibility modeling conducted in June 2016 by RAMBOLL ENVIRON has led to the revised seasonal curtailment periods for Unit 1 (“ENVIRON Report”).¹ The following table presents the changes to the Unit 1 seasonal curtailment periods per the updated modeling. There are no changes to the proposed NO_x and SO₂ rates that would be the basis for selection of each interim operating strategy.

Original Approach		Revised Approach	
Scenario	Unit 1 Curtailment Period	Scenario	Unit 1 Curtailment Period
BTB1	Nov 1 – Feb 29	IS1	Oct 1 – Apr 15
BTB2	Nov 11 – Dec 31	IS2	Oct 21 – Jan 31
BTB3	Nov 21 – Dec 31	IS3	Nov 21 – Jan 20
BTB4	Nov 21 – Dec 31	IS4	Nov 21 – Jan 20

¹ SRP provided a copy of the ENVIRON report, “Revised Better-than-BART Analysis for the Coronado Generating Station using the CAMx Photochemical Grid Model,” June 2016 as part of this submittal dated July 19, 2016.

BART Alternative Approach

As explained earlier, this addendum presents a revision to the characterization of the BART Alternative per 40 CFR § 51.308(e)(3) to account for two alternative operating strategies, OS-1 and OS-2. Each of these strategies combines the interim operating strategies with a final BART Alternative election. In the January 2016 application SRP proposed that, if the Unit 1 closure option was elected, the seasonal curtailment would not be required for the period from the date of the selection of the final BART option to the date of permanent cessation of unit operation. With this supplement, under OS-2, SRP will now continue the Unit 1 curtailments (i.e., the interim operating strategies) until the date of the Unit 1 retirement. The table below presents the proposed BART Alternative operating strategies including the interim operating strategy for the CGS units.

Control Strategy		Unit 1 (lb/MMBtu) (30-boiler- operating-day average)		Unit 2 SO ₂ (lb/MMBtu) (30-boiler- operating-day average)	Unit 1 Curtailment Period
		NO _x	SO ₂		
BART control strategy (2016 EPA BART Reconsideration for NO _x and 2012 ADEQ BART for SO ₂)		0.065	0.080	0.080	N/A
BART Alternative Operating Strategy SCR Option (OS-1)					
Interim Operating Strategy	IS1	0.320	0.080	0.080	Oct. 1-Apr. 15
	IS2	0.320	0.070	0.070	Oct. 21-Jan. 31
	IS3	0.320	0.050	0.050	Nov. 21-Jan. 20
	IS4	0.310	0.060	0.060	Nov. 21-Jan. 20
Final BART Alternative Strategy	SCR Installation and Operation no later than December 31, 2029.	0.065	0.080	0.080	N/A
BART Alternative Operating Strategy Shutdown Unit 1 Option (OS-2)					
Interim Operating Strategy	IS1	0.320	0.080	0.080	Oct. 1-Apr. 15
	IS2	0.320	0.070	0.070	Oct. 21-Jan. 31
	IS3	0.320	0.050	0.050	Nov. 21-Jan. 20
	IS4	0.310	0.060	0.060	Nov. 21-Jan. 20
Final BART Alternative Strategy	Unit Closure no later than December 31, 2029.	0.000	0.000	0.080	N/A

Demonstration of Greater Reasonable Progress

The updated ENVIRON report addresses the two-prong demonstration of greater reasonable progress pursuant to 40 CFR § 51.308(e)(3). The detailed visibility assessment in the ENVIRON report confirms that the interim operating strategy (specified in the report under the old nomenclature of BTB1, BTB2, BTB3, and BTB4) passes the two-prong test for better-than-BART determination.

Timing of BART Emissions Reductions

SRP is proposing to implement the BART Alternative on the same compliance date established by the BART FIP promulgated by the U.S. EPA, December 5, 2017. Thus, the emissions reductions and associated visibility benefits will occur during the first long-term planning period under Arizona's regional haze requirements, consistent with U.S. EPA rule.

Surplus Emissions Reductions

Proposed changes to the Unit 1 curtailment periods, resulted in revisions to the emissions reductions associated with the BART Alternative for CGS units. Due to the longer curtailment periods for Unit 1, the annual emission decrease as shown in the updated combined annual emission table below.

Operating Scenarios	NO _x	SO ₂	PM
2007 Baseline	14,910	21,560	994
2014 Baseline	6,506	2,651	994
2012 ADEQ BART	10,603	2,651	994
2015 EPA BART Reconsideration (NO _x) and 2012 ADEQ BART (SO ₂ and PM)	2,410	2,651	994
IS1	3,768	1,966	737
IS2	5,053	2,002	858
IS3	5,667	1,526	915
IS4	5,533	1,831	915

In addition the magnitude of emissions decreases became larger. The updated table of emissions reductions for the CGS units for the BART Alternative for the four different interim operating strategies is presented below.

Strategy Comparison with Baseline	NO _x Reductions		SO ₂ Reductions		PM(f) Reductions	
	(tons/year)	Percentage	(tons/year)	Percentage	(tons/year)	Percentage
BART Control Strategy	-4,096	63%	0	0%	0	0%
IS1	-2,738	42%	-684	26%	-257	26%
IS2	-1,453	22%	-649	24%	-136	14%
IS3	-832	13%	-1,125	42%	-79	8%
IS4	-972	15%	-820	31%	-79	8%

Other Application Elements

This addendum provides a revision to the terminology used to describe the various strategies under the BART Alternative, and provides information regarding changes to proposed curtailment periods and associated emissions reductions based on revised modeling conducted in support of the application. Affected portions of Appendix A: Proposed SIP/Permit Revision Requirements have changed to reflect revisions proposed in this addendum. All other elements of the SRP Application remain applicable and substantially unchanged. In particular, all permit application elements associated with the SCR system that is now required under OS-1, including analysis required for prevention of significant deterioration permitting remain unchanged. Because SRP plans to continue seasonal curtailments until the date of

retirement of Unit 1 if OS-2 is elected, as previously noted, SRP expects that ADEQ will give no consideration to the technology assessment (e.g., the cost effectiveness analyses for SCR and SNCR under a shortened remaining useful life) included in the SRP Application.

